

Appendix H

Water Quality Monitoring Equipment

Calibration Certificate



專業化驗有限公司
QUALITY PRO TEST-CONSULT LIMITED

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REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION

Test Report No. : R-BC030016
Date of Issue : 10 March 2023
Page No. : 1 of 2

PART A - CUSTOMER INFORMATION

Acuity Sustainability Consulting Limited
Unit E, 12/F, Ford Glory Plaza 37-39 Wing Hong Street, Cheung Sha Wan, Kowloon, Hong Kong

PART B - SAMPLE INFORMATION

Name of Equipment : YSI ProDSS (Multi-Parameters)
Manufacturer : YSI (a xylem brand)
Serial Number : 22D100436
Date of Received : 08 March 2023
Date of Calibration : 09 March 2023
Date of Next Calibration : 08 June 2023
Request No. : D-BC030016

PART C - REFERENCE METHODS/ DOCUMENTS FOR THE CALIBRATION

Test Parameter	Reference Method
pH value	APHA 21e 4500 H ⁺
Temperature	Section 6 of international Accreditation New Zealand Technical Guide no. 3 Second edition March 2008: Working Thermometer Calibration Procedure
Salinity	APHA 21e 2520 B
Dissolved oxygen	APHA 21e 4500 O
Turbidity	APHA 21e 2130 B

PART D - CALIBRATION RESULT

(1) pH value

Target (pH unit)	Display Reading (pH unit)	Tolerance	Result
4.00	4.09	0.09	Satisfactory
7.42	7.43	0.01	Satisfactory
10.01	10.03	0.02	Satisfactory

Tolerance of pH value should be less than ± 0.2 (pH unit)

(2) Temperature

Reading of Ref. thermometer (°C)	Display Reading (°C)	Tolerance	Result
13	12.8	0.3	Satisfactory
22	22.2	0.2	Satisfactory
34	34.5	0.5	Satisfactory

Tolerance of Temperature should be less than ± 2.0 (°C)


(3) Salinity

Expected Reading (g/L)	Display Reading (g/L)	Tolerance (%)	Result
10	9.72	-2.80	Satisfactory
20	19.65	-1.75	Satisfactory
30	29.95	-0.17	Satisfactory

Tolerance of Salinity should be less than ± 10.0 (%)

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REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION

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Date of Issue : 10 March 2023
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(4) Dissolved oxygen

Expected Reading (mg/L)	Display Reading (mg/L)	Tolerance	Result
8.59	8.75	0.16	Satisfactory
5.62	5.95	0.33	Satisfactory
3.41	3.52	0.11	Satisfactory
0.10	0.20	0.10	Satisfactory

Tolerance of Dissolved oxygen should be less than ± 0.5 (mg/L)

(5) Turbidity

Expected Reading (NTU)	Display Reading (NTU)	Tolerance (%)	Result
0	0.39	--	Satisfactory
10	9.95	-0.5	Satisfactory
20	19.02	-4.9	Satisfactory
100	99.67	-0.3	Satisfactory
800	781.24	-2.3	Satisfactory

Tolerance of Turbidity should be less than ± 10.0 (%)

Remark(s)

- The "Date of Next Calibration" is recommended according to best practice principals as practiced by QPT or quoted form relevant international standards.
- The results relate only to the calibrated equipment as received
- The performance of the equipment stated in this report is checked with independent reference material and results compared against a calibrated secondary source.
- "Displayed Reading" denotes the figure shown on item under calibration/ checking regardless of equipment precision or significant figures.
- The "Tolerance Limit" mentioned is the acceptance criteria applicable for similar equipment used by Quality Pro Test-Consult Ltd. or quoted form relevant international standards.

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REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION

Test Report No. : R-BC040001
Date of Issue : 03 April 2023
Page No. : 1 of 2

PART A - CUSTOMER INFORMATION

Acuity Sustainability Consulting Limited

Unit E, 12/F, Ford Glory Plaza 37-39 Wing Hong Street, Cheung Sha Wan, Kowloon, Hong Kong

PART B - SAMPLE INFORMATION

Name of Equipment : HORIBA U-53
Manufacturer : HORIBA
Serial Number : S2A98W8H
Date of Received : 29 March 2023
Date of Calibration : 03 April 2023
Date of Next Calibration : 02 July 2023
Request No. : D-BC040001

PART C - REFERENCE METHODS/ DOCUMENTS FOR THE CALIBRATION

Test Parameter	Reference Method
pH value	APHA 21e 4500 H ⁺
Temperature	Section 6 of international Accreditation New Zealand Technical Guide no. 3 Second edition March 2008: Working Thermometer Calibration Procedure
Salinity	APHA 21e 2520 B
Dissolved oxygen	APHA 21e 4500 O
Turbidity	APHA 21e 2130 B

PART D - CALIBRATION RESULT

(1) pH value

Target (pH unit)	Display Reading (pH unit)	Tolerance	Result
4.00	4.04	0.04	Satisfactory
7.42	7.39	-0.03	Satisfactory
10.01	10.10	0.09	Satisfactory

Tolerance of pH value should be less than ± 0.2 (pH unit)

(2) Temperature

Reading of Ref. thermometer (°C)	Display Reading (°C)	Tolerance	Result
15	15.84	0.84	Satisfactory
23	23.99	0.99	Satisfactory
33	33.38	0.38	Satisfactory

Tolerance of Temperature should be less than ± 2.0 (°C)

(3) Salinity

Expected Reading (g/L)	Display Reading (g/L)	Tolerance (%)	Result
10	9.46	-5.40	Satisfactory
20	19.84	-0.80	Satisfactory
30	30.07	0.23	Satisfactory

Tolerance of Salinity should be less than ± 10.0 (%)

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Test Report No. : R-BC040001
Date of Issue : 03 April 2023
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(4) Dissolved oxygen

Expected Reading (mg/L)	Display Reading (mg/L)	Tolerance	Result
7.69	7.68	-0.01	Satisfactory
6.77	6.49	-0.28	Satisfactory
3.85	3.93	0.08	Satisfactory
0.07	0.18	0.11	Satisfactory

Tolerance of Dissolved oxygen should be less than ± 0.5 (mg/L)

(5) Turbidity

Expected Reading (NTU)	Display Reading (NTU)	Tolerance (%)	Result
0	0.33	--	Satisfactory
10	10.3	3.0	Satisfactory
20	20.1	0.5	Satisfactory
100	102	2.0	Satisfactory
800	773	-3.4	Satisfactory

Tolerance of Turbidity should be less than ± 10.0 (%)

Remark(s)

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REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION

Test Report No. : R-BC040109
Date of Issue : 25 April 2023
Page No. : 1 of 2

PART A - CUSTOMER INFORMATION

Acuity Sustainability Consulting Limited

Unit E, 12/F, Ford Glory Plaza 37-39 Wing Hong Street, Cheung Sha Wan, Kowloon, Hong Kong

PART B - SAMPLE INFORMATION

Name of Equipment : YSI ProDSS (Multi-Parameters)
Manufacturer : YSI (a xylem brand)
Serial Number : S/N: 22C106561
Date of Received : 18 April 2023
Date of Calibration : 25 April 2023
Date of Next Calibration : 24 July 2023
Request No. : D-BC040109

PART C - REFERENCE METHODS/ DOCUMENTS FOR THE CALIBRATION

Test Parameter	Reference Method
pH value	APHA 21e 4500 H ⁺
Temperature	Section 6 of international Accreditation New Zealand Technical Guide no. 3 Second edition March 2008: Working Thermometer Calibration Procedure
Salinity	APHA 21e 2520 B
Dissolved oxygen	APHA 21e 4500 O
Turbidity	APHA 21e 2130 B

PART D - CALIBRATION RESULT

(1) pH value

Target (pH unit)	Display Reading (pH unit)	Tolerance	Result
4.00	4.10	0.10	Satisfactory
7.42	7.50	0.08	Satisfactory
10.01	10.01	0.00	Satisfactory

Tolerance of pH value should be less than ± 0.2 (pH unit)

(2) Temperature

Reading of Ref. thermometer (°C)	Display Reading (°C)	Tolerance	Result
10	10.5	0.5	Satisfactory
23	23.1	0.1	Satisfactory
35	34.4	-0.1	Satisfactory

Tolerance of Temperature should be less than ± 2.0 (°C)


(3) Salinity

Expected Reading (g/L)	Display Reading (g/L)	Tolerance (%)	Result
10	9.81	-1.90	Satisfactory
20	20.47	2.35	Satisfactory
30	31.31	4.37	Satisfactory

Tolerance of Salinity should be less than ± 10.0 (%)

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REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION

Test Report No. : R-BC040109
Date of Issue : 25 April 2023
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(4) Dissolved oxygen

Expected Reading (mg/L)	Display Reading (mg/L)	Tolerance	Result
8.07	8.08	0.01	Satisfactory
5.10	4.80	-0.30	Satisfactory
2.06	2.17	0.11	Satisfactory
0.24	0.37	0.13	Satisfactory

Tolerance of Dissolved oxygen should be less than ± 0.5 (mg/L)

(5) Turbidity

Expected Reading (NTU)	Display Reading (NTU)	Tolerance (%)	Result
0	0.74	--	Satisfactory
10	9.60	-4.00	Satisfactory
20	18.94	-5.30	Satisfactory
100	95.17	-4.80	Satisfactory
800	752.06	-6.00	Satisfactory

Tolerance of Turbidity should be less than ± 10.0 (%)

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